

TOPIC, FOCUS AND SUBJECT
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PATIENT TOPICS IN SPANISH AND YUCATEC: PASSIVIZATION OVER LEFT-DISLOCATION



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SYNOPSIS

- ▶ Topicality and grammar: Corpus data
- ▶ Topicality and grammar: Production data
- ▶ (Why) Yucatec
- ▶ The experiments
- ▶ Discussion

TOPICALITY AND GRAMMAR: CORPUS DATA

- ▶ Givón (1979): in English active transitive clauses, the subject is overwhelmingly definite and thus broadly topical
 - ▶ whereas the object is split evenly b/w definite and indefinite NPs

Definite Subjects and Objects in Declarative-Affirmative-Active Clauses								
Discourse type ^a	Subject				Direct object			
	Definite		Indefinite		Definite		Indefinite	
	N	Percentage	N	Percentage	N	Percentage	N	Percentage
Nonfiction	43	87	6	13	24	48	25	52
Fiction	160	90	17	10	123	64	68	36
News	36	80	9	20	15	33	30	67
Sports	63	98	1	2	31	48	33	52
Total	302	91	33	9	193	56	156	44

^a The counts were made in the following texts: Nonfiction—Chomsky (1973, pp. 3–12), Fiction—L'Amour (1965, pp. 1–25), News—*The Los Angeles Times*, front page, 9-1-74, Sports—*The Los Angeles Times*, front page of sports section, 9-1-74. All are narrative texts, and I concur with Longacre (1979) and Hinds (1979) in considering narrative as the most basic discourse type. A law codicile, for example, will have a much higher ratio of indefinite subjects.

Table 1.1. *Distribution of NPs by definiteness and syntactic function in a small corpus of English (Givón 1979: 52)*

- ▶ Givón (1979) (cont.)
 - ▶ typologically the most common construction when the 'agent' is not the most topical argument: passives

To the extent that passivization has any universal validity, it involves—at the very least—the removal of the agent from the topic position. Most often, by various means and commonly by default, another argument is then promoted to the most topical position. Givón (1979: 21)

transformational-generative model.⁴⁵ However, if one counts actual texts of English, one discovers the following situation:⁴⁶

1. Roughly 90% of passive sentences are *agentless*.
2. Of the 10% with overtly expressed agents, the majority are *indefinite* and **all** are expressing the agent as the *focus of new information*. Givón (1979: 39)

- ▶ Givón (1979) (cont.)
 - ▶ left-dislocations ('topic shift constructions') are used when the identity of the topic referent is changing/confusable

less-marked subject construction. As discussed in Chapter 2, (but see also Duranti and Keenan, 1979), topic-shift constructions are used when the assignment of coreferential identity is judged to be *more difficult*, as compared with the use of the simple subject construction. Our question

Givón (1979: 39)

- ▶ left-dislocations represent an important grammaticalization source for subject (agreement) constructions

Topic-shift (marked)

John, he left
TOP PRO V



Subject (unmarked)

John he-left
SUBJ AGR-V

Givón (1979: 38)

- ▶ supporting evidence: the givenness/accessibility hierarchy
 - ▶ topicality ~ accessibility ~ argument realization/NP weight
 - ▶ (Chafe 1976, 1994; Givón 1983; Prince 1981; Gundel et al. 1993; Lambrecht 1994: 74-116; *inter alia*)

By 'in focus',
Gundel et al. mean
"attention is focused
on the referent", i.e.,
the referent is highly
accessible = topical

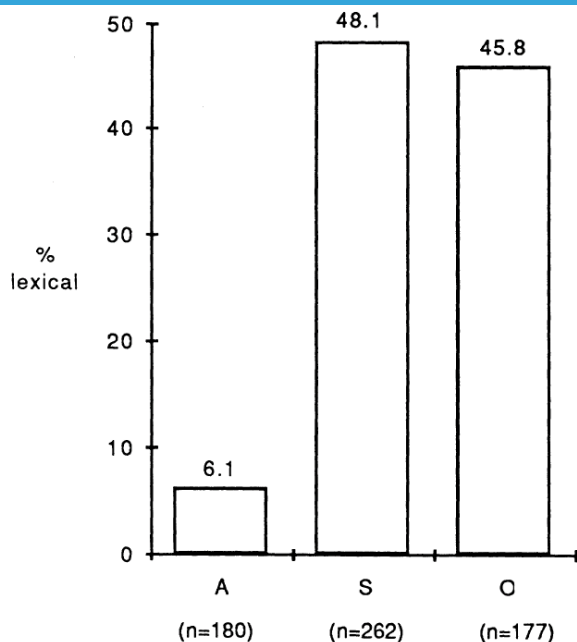
THE GIVENNESS HIERARCHY:

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
{it}		$\left\{ \begin{array}{l} \textit{that} \\ \textit{this} \\ \textit{this N} \end{array} \right\}$		{that N}		{the N}		{indefinite <i>this</i> N}		{a N}

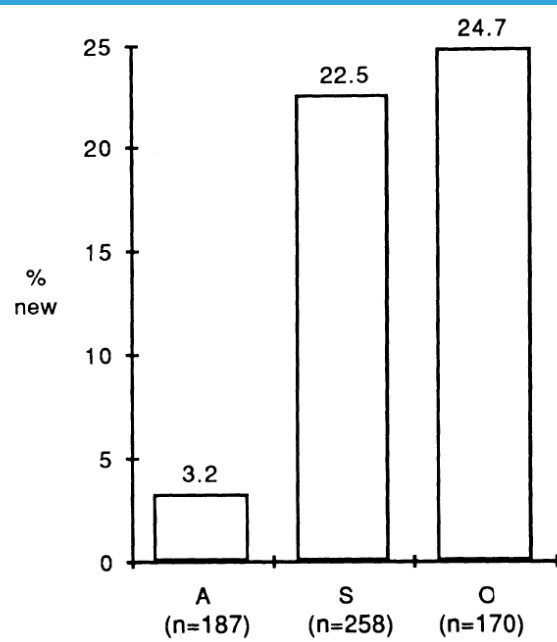
Figure 1.1. *The Givenness hierarchy (Gundel et al. 1993: 275)*

- ▶ supporting evidence: preferred argument structure
 - ▶ Du Bois (1987) based on a corpus of 18 Pear Story narratives (Chafe 1980) by speakers of Sacapultec Maya

Where do lexical arguments go?



Where do new mentions go?



Where do human referents go?

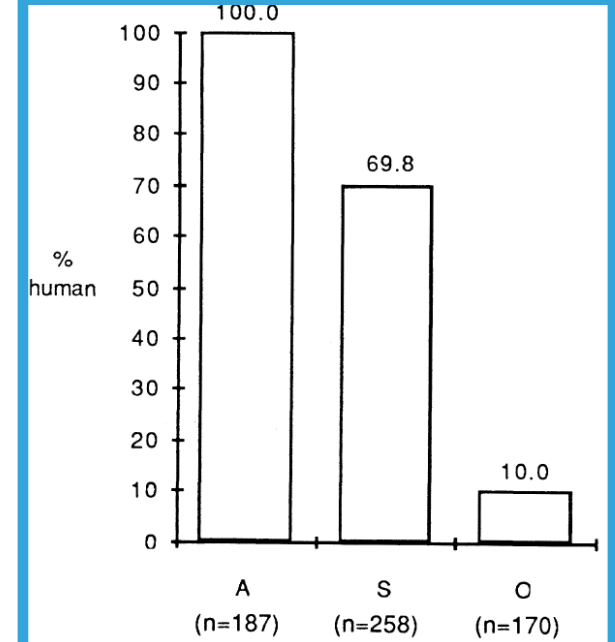


Figure 1.2. Distribution of NPs in a corpus of Sacapultec Pear Story narratives by syntactic function and realization type (left), discourse status (center), and animacy (Du Bois 1987: 822, 828, 841)

- ▶ supporting evidence: preferred argument structure (cont.)
 - ▶ Du Bois (2003) based on a meta-study of corpus data from 8 languages

Table 1.2. *Lexical NPs by syntactic function in Du Bois's (2003: 37) meta study*

Role:	A		S		O		Total	
Language	N	%	N	%	N	%	N	%
Hebrew	18	(8)	103	(44)	111	(48)	232	(100)
Sakapultek	11	(5)	126	(58)	81	(37)	218	(100)
Papago	37	(10)	169	(47)	152	(42)	358	(99)
English	21	(8)	90	(35)	146	(57)	257	(100)
Spanish	35	(6)	215	(36)	341	(58)	591	(100)
French	32	(5)	290	(45)	324	(50)	646	(100)
BrPortuguese		(8)		(39)		(53)		(100)
Japanese	48	(7)	320	(48)	293	(44)	661	(100)

Table 1.3. *Source studies of Du Bois's (2003) meta study*

Language	Source
Brazilian Portuguese	Dutra (1987)
English	Kumagai (2000)
French	Ashby & Bentivoglio (1993)
Hebrew	Smith (1996)
Japanese	Matsumoto (1997)
Papago	Payne (1987)
Spanish	Ashby & Bentivoglio (1993)
Sacapultec	Du Bois (1987)

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- ▶ Topicality and grammar: Corpus data
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TOPICALITY AND GRAMMAR: PRODUCTION DATA

- ▶ the view from psycholinguistics
 - ▶ speech production is incremental
 - ▶ order of mention is influenced by
 - ▶ the referent's inherent conceptual properties: animacy, imageability, prototypicality
 - ▶ Bock & Warren 1985; Bock et al. 1992; Onishi et al. 2008; Christianson & Ferreira 2005; Ferreira 1994; McDonald et al. 1993; Prat-Sala & Branigan 2000; Tanaka et al. 2011; Van Nice & Dietrich 2003; *inter alia*
 - ▶ the referents' status in context: attention; priming; givenness/topicality
 - ▶ Bock 1982, 1986; Osgood 1971; Prentice 1967; Sridhar 1988; Tannenbaum & Williams 1968; Tomlin 1985, 1995, 1997

- ▶ two key open questions
 - ▶ how do inherent and contextual properties of referents interact in production?
 - ▶ what is the impact of language-specific constructions on production?
 - ▶ e.g., word order; morphosyntactic alignment and grammatical relations; topic prominence
- ➡ let's look at answers from Prat-Sala & Branigan (2000), a study that helped inspire ours

- ▶ Prat-Sala & Branigan (2000) [PSB]
 - ▶ two experiments
 - ▶ populations: 2 × 20 L1 speakers of English and Spanish
 - ▶ materials: each trial involves
 - ▶ a story vignette
 - ▶ a picture representing the culmination of the story
 - ▶ a prompt 'What happened?'
 - ▶ each experiment includes 16 target items, 24 fillers

- ▶ [PSB] (cont.)
 - ▶ manipulations
 - ▶ the animacy of the stimulus entities
 - ▶ Experiment 1: all inanimate
 - ▶ Experiment 2: inanimate agents, animate patients

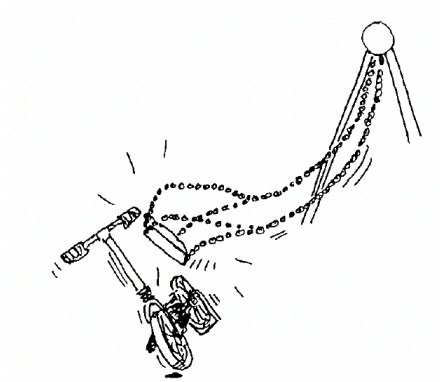


Figure 2.1. Sample target picture stimulus of Experiment 1: a swing hitting a scooter (Prat-Sala & Branigan 2000: 172)



Figure 2.2. Sample target picture stimulus of Experiment 2: a swing hitting a man (Prat-Sala & Branigan 2000: 176)

- ▶ [PSB] (cont.)
 - ▶ manipulations (cont.)
 - ▶ the story vignette draws selective attention to one of the two entities featured in story and picture
 - ▶ rendering it more topical

(2.1) *English agent prompt for Figure 2.1*

“There was this old rusty swing standing in a playground next to a scooter, swaying and creaking in the wind. What happened?”

(2.2) *English patient prompt for Figure 2.1*

“There was this old red scooter standing in a playground near a swing, with rusty wheels and scratched paint. What happened?” (Prat-Sala & Branigan 2000: 172)

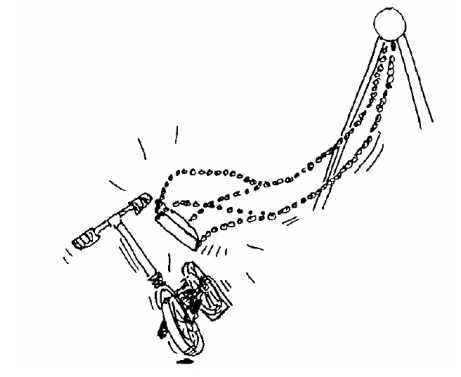


Figure 2.1. Sample target picture stimulus of Experiment 1: a swing hitting a scooter (Prat-Sala & Branigan 2000: 172)

- ▶ [PSB] (cont.)
 - ▶ predictions
 - ▶ **animacy**: if animacy affects production, passives should be more frequent in E2 than in E1
 - ▶ **topicality**: if topicality affects production, passives should be more frequent in patient-salient trials
 - ▶ **language**: if language affects production, patient-salient trials might boost the use of left-dislocations in Spanish
 - ▶ but not in English, as Spanish has more flexible word order

(2.3) A *la* *mujer*_i *la*_i *atropell-ó* *el* *tren*
OBL DEF.SG.F woman DEF.SG.F.OBL run.over-PAST.SG DEF.SG.M train(NOM)
'The woman, the train ran her over' (Prat-Sala & Branigan 2000: 172)

► [PSB] (cont.)

- results: all three predictions were confirmed
 - **animacy**: if animacy affects production, passives should be more frequent **in E2** than **in E1**

Table 2.1. "Total number of responses in each experiment and condition by scoring category (Prat-Sala & Branigan 2000: 174)"

	Agent-salient				Patient-salient			
	Active	Passive	Dislocation	Other	Active	Passive	Dislocation	Other
English, Experiment 1	101 (90.2%)	11 (9.8%)	N/A	48	82 (72.6%)	31 (27.4%)	N/A	47
Spanish, Experiment 1	130 (99.3%)	1 (0.7%)	0 (0%)	29	94 (83.2%)	12 (10.6%)	7 (6.2%)	47
English, Experiment 2	95 (77.2%)	28 (22.8%)	N/A	37	40 (37.7%)	66 (62.3%)	N/A	54
Spanish, Experiment 2	117 (95.1%)	4 (3.3%)	2 (1.6%)	37	60 (53.1%)	26 (23%)	27 (23.9%)	47

- ▶ [PSB] (cont.)
 - ▶ results: all three predictions were confirmed (cont.)
 - ▶ **topicality**: if topicality affects production, passives should be more frequent **in patient-salient trials**

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► [PSB] (cont.)

- results: all three predictions were confirmed (cont.)
 - **language:** if language affects production, patient-salient trials might boost the use of **left-dislocations in Spanish**

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- ▶ [PSB] (cont.)
 - ▶ interim conclusions
 - ▶ animacy, topicality, and word order (freedom)
all matter in speech production
 - ▶ a surprise: left-dislocated human patient topics
as an alternative to passivization
 - ▶ and now: a replication of [PSB] (with a similar design)
comparing Spanish to Yucatec Maya
 - ▶ a topic-prominent, verb-initial language with morpho-syntactic constraints on obviative alignment

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(WHY) YUCATEC

- ▶ exclusive head-marking: all arguments are cross-referenced on their heads by two series of bound person markers

Table 3.1. *Distribution and functions of the two paradigms of cross-reference markers*

Environment	Set A	Set B
Transitive V	A	P
Intransitive and passivized V	S / incomplete status	S / all other status
Other	Possessor	S of nonverbal pred

(3.1) Síi **in=**iiho-**ech**, **in=**pàal-**ech**, ko'x!

yes **A1SG=**son-**B2SG** **A1SG=**child-**B2SG** HORT

'You ARE my son alright, you ARE my child; let's go!' (Lehmann ms.a)

(3.2) T-**inw=**il-ah-**ech** te=ha'ts+kab+k'in=a'

PRV-**A1SG=**see-CMP-**B2SG** PREP:DEF=divide:PASS+earth+sun=D1

'I saw you this morning.'

- ▶ basic verb-patient-agent (VPA) order

(3.3) a. T-u=nes_i-ah-∅_j [hun-túul pàal]_j [le=xoh]_i=o'

PRV-A3=gnaw-CMP(B3SG) one-CL.AN child DEF=cockroach=D2

'The cockroach bit a child' [elicited]

b. T-u=nes-ah-∅

PRV-A3=gnaw-CMP(B3SG)

'It bit it' [constructed]

- ▶ subject/pivot *and* topic prominence:
the more topical of two lexical arguments will be left-dislocated
- ▶ this position is marked by an **intonation break**
and a set of **clause-boundary particles**

(3.4) **Hun-túul xib=e',**
one-CL.AN male=TOP

h-ts'o'k u=bèel y=éetel hun-túul x-ch'úupal
PRV-end(B3SG) A3=way A3=COM one-CL.AN F-female:child

ma' t-uy=ohel-t-ah wáah x-wáay=i'.
NEG(B3SG) PRV-A3=knowledge-APP-CMP(B3SG) ALT F-sorcerer(B3SG)=D4

'A man, he married (lit. his road ended with) a girl
not knowing that she was a witch' (Romero Castillo 1964: 305)

- ▶ due to head-marking, there is no overt structural difference between left-dislocation and topicalization

(3.5) *Left-dislocation/topicalization of an argument*

Juan=e', túun lúub-s-ik le=che'=o'

Juan=TOP PROG:A3 fall-CAUS-INC(B3.SG) DEF=tree=D2

'Juan, he's felling the tree.'

(3.6) *Left-dislocation/topicalization of non-argument*

U=nah-il **Pedro=e'**, nohol yàan u=ho'l

A3=house-REL **Pedro=TOP** south EXIST(B3SG) A3=hole

'As for Pedro's house, its door is (facing) south.'

► argument realization strategies

Table 3.2. *Argument realization strategies in Yucatec*
(Bohnmeyer 2009: 195; Bohnmeyer & Tilbe 2021)

Realization	Referent	Given	New
Bare cross-reference marker		Anaphoric reference (extending ‘topic chains’)	N/A
Lexical NP		Resuming discontinued topics; maintaining multiple competing topic chains	Introducing new referents
Left-dislocated/topicalized lexical NP		Contrastive topics and frame setters	Introducing new referents in thetic utterances and as topics in generic categorical utterances

- ▶ obviative alignment constraints
(Bohnenmeyer 2009; cf. Zavala (2017: 247-255) on Mayan generally)

(3.7) *Clash: bare active clause, P outranking A in animacy*

??T-u=chi'-ah Pedro le=kàan=o'.

PFV-A3=mouth-CMP(B3SG) Pedro DEF=snake=D2

Intended: 'The snake bit Pedro'

Actual interpretation: 'Pedro bit the snake'

(3.8) *Avoiding the clash: P outranking A in animacy,
but A outranking P in definiteness*

T-u=kins-ah hun-túul nohoch máak

PFV-A3=die:CAUS-CMP(B3SG) one-CL.AN big person

le=x-chìiwol=o'

DEF=F-tarantula=D2

'The tarantula killed an old person'

- ▶ obviative alignment constraints (cont.)
 - ▶ Yucatec lacks a dedicated inverse voice for resolving clashes

(3.9) *Resolving the clash: left-dislocation/topicalization*

Le=kàan=o', t-u=chi'-ah Pedro

DEF=snake=D2 PFV-A3=mouth-CMP(B3SG) Pedro

'The snake, it bit Pedro'

(3.10) *Resolving the clash: passivization*

H-chi'-**b** Pedro tuméen hun-túul kàan

PFV-A3=mouth-CMP.**PASS**(B3SG) Pedro CAUSE one-CL.AN snake

'Pedro was bitten by a snake'

(3.11) *Resolving the clash: agent focus construction*

Pedro=e', h-kim-ih. **Kàan chi'-eh.**

Pedro=top PFV-A3=die-CMP(B3SG) **snake mouth-SUBJ(B3SG)**

'Pedro, he died. (It was) (a) SNAKE (that) bit him.'

- ▶ we replicated Prat-Sala & Branigan (with new stimuli)) with speakers of Yucatec and (Yucatecan) Spanish
- ▶ questions
 - ▶ what is the role of animacy and topicality in production in a language with
 - ▶ pure head-marking
 - ▶ V-initial syntax and mixed topic/pivot prominence
 - ▶ obviative alignment constraints?

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THE EXPERIMENTS

- ▶ as in Prat-Sala & Branigan (2000) [PSB]
 - ▶ two populations: L1 Yucatec vs. L1 Spanish
 - ▶ students at Universidad de Oriente in Valladolid, Yucatán
 - ▶ where they were tested
 - ▶ two conditions:
 - ▶ manipulating animacy
 - through stimulus videos (E1, E2)
 - ▶ manipulating topicality
 - through prompts (E3, E4)

- ▶ manipulating animacy in E1 and E2
 - ▶ 80 animated videos incl. 16 fillers (feat. transfer scenes)
 - ▶ 4 × 16 target items in 4 animacy conditions
 - ▶ human/animal/inanimate A(gent)
 - ▶ human/animal/inanimate P(patient)
 - ▶ distributed across 4 lists
 - ▶ evenly distributed across four action types
 - ▶ chasing, hitting, pulling, attacking

- manipulating animacy in E1 and E2 (cont.)

- the target scenes: examples



(a) A policeman chasing a farmer (human agent, human patient)



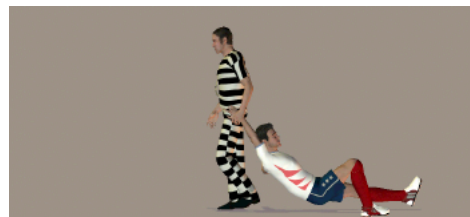
(b) A policeman chasing a horse (human agent, animal patient)



(c) A dog chasing a farmer (animal agent, human patient)



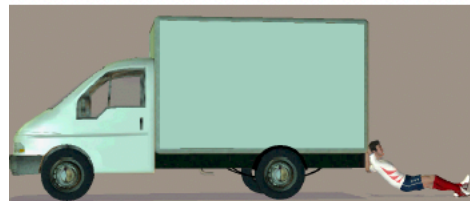
(d) A dog chasing a horse (animal agent, animal patient)



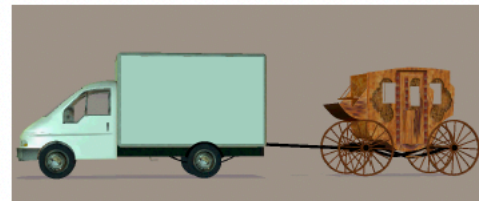
(a) A prisoner pulling a soccer player (human agent, human patient)



(b) A prisoner pulling a carriage (human agent, inanimate patient)



(c) A truck pulling a soccer player (inanimate agent, human patient)







(d) A truck pulling a carriage (inanimate agent, inanimate patient)

Figure 4.1. Stills illustrating 8 of the 64 target scenes: chasing actions (top 2 rows) vs. pulling actions (bottom 2 rows); within each group of 4, animacy conditions clockwise from top left (human>human, human>non-human, non-human>non-human, non-human > human)

► manipulating topicality in E3 and E4

Table 4.1. Agent, patient, and general prompts for human *P* and inanimate *P* conditions in Spanish (left) and Yucatec (examples)

Patient	Topic	Topic prompt	Video
Human	Agent	<i>Habláme sobre el carro.</i> “Tell me about the car.”	
	General	<i>Díme que pasó.</i> “Tell me what happened.”	
	Patient	<i>Habláme sobre el vaquero.</i> “Tell me about the cowboy.”	
Inanimate	Agent	<i>Habláme sobre el carro.</i> “Tell me about the car.”	
	General	<i>Díme que pasó.</i> “Tell me what happened.”	
	Patient	<i>Habláme sobre el carrito.</i> “Tell me about the cart.”	

Patient	Topic	Topic prompt	Video
Human	Agent	<i>T'aan-nen yo'olal le kiisbuts-o'.</i> speech-IMP(B3SG) about the car-there “Tell me about the car.”	
	General	<i>A'al teen ba'ax uuch-ij.</i> say.IMP(B3SG) me what happen-PRV “Tell me what happened.”	
	Patient	<i>T'aan-nen yo'olal le kalan-wakax-o'.</i> speech-IMP(B3SG) about the caretaker-cow-there “Tell me about the cowboy.”	
Inanimate	Agent	<i>T'aan-nen yo'olal le kiisbuts-o'.</i> speech-IMP(B3SG) about the car-there “Tell me about the car.”	
	General	<i>A'al teen ba'ax uuch-ij.</i> say.IMP(B3SG) me what happen-PRV “Tell me what happened.”	
	Patient	<i>T'aan-nen yo'olal le seesta-o'.</i> speech-IMP(B3SG) about the basket-there “Tell me about the basket.”	

► overall design

Table 4.2. *Overview of the four experiments*

Experiment	Participants	Videos (animacy manipulation)	Task (topic manipulation)
1	34 L1-Spanish speakers	Crossed animacy conditions (4×16 target scenes plus 16 fillers)	Describe the video using one complete sentence (instructions administered in Spanish/Yucatec)
2	24 L1-Yucatec speakers		
3	31 L1-Spanish speakers (after excl.)	Hitting and pulling scenes with non-human A (non-human > human and non-human > non-human) and only (2×8 target scenes plus 32 fillers)	3 topic conditions administered through prompts: ‘Tell me about the [AGENT]/[PATIENT]/WHAT HAPPENED!’
4	20 L1-Yucatec speakers (after excl.)		

- ▶ results: animacy manipulation only (E1, E2)
 - ▶ word order: AVP responses
 - ▶ canonical order in Spanish, A-dislocations in Yucatec

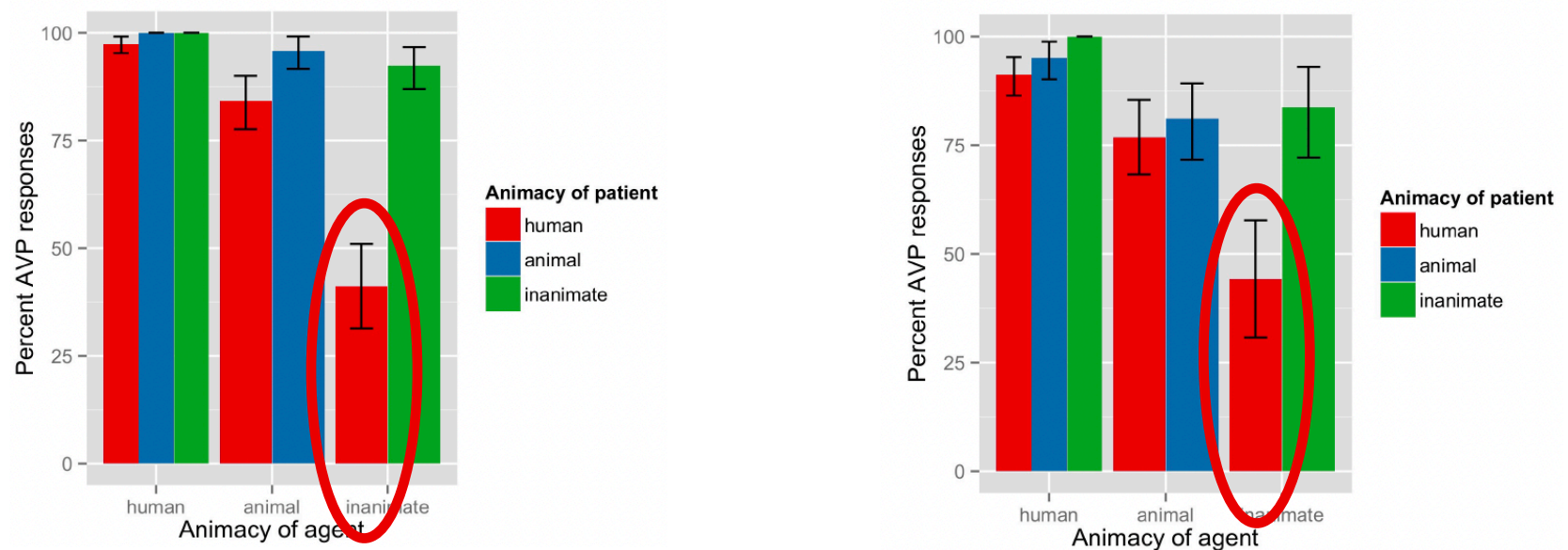


Figure 4.2. Percentage of AVP responses by animacy of agent and patient in Spanish (left) and Yucatec

- ▶ animacy/humanness influences production in both languages
 - ▶ scenes with inanimate A > human P
strongly depressed AVP responses in both languages

- ▶ results: animacy manipulation only (E1, E2)
 - ▶ word order: AVP responses (cont.)
 - ▶ analysis
 - ▶ Spanish (E1): main effects of both
 - ▶ A humanness ($\hat{\beta} = 4.72; z = 8.1; p < .001$)
 - ▶ P humanness ($\hat{\beta} = -3.61; z = -7.8; p < .001$)
 - ▶ Yucatec (E2): main effects of both
 - ▶ A humanness ($\hat{\beta} = 0.15; z = 9.09; p < .001$)
 - ▶ P humanness ($\hat{\beta} = -0.09; z = -5.41; p < .01$)

- ▶ results: animacy manipulation only (E1, E2) (cont.)
 - ▶ voice: active responses

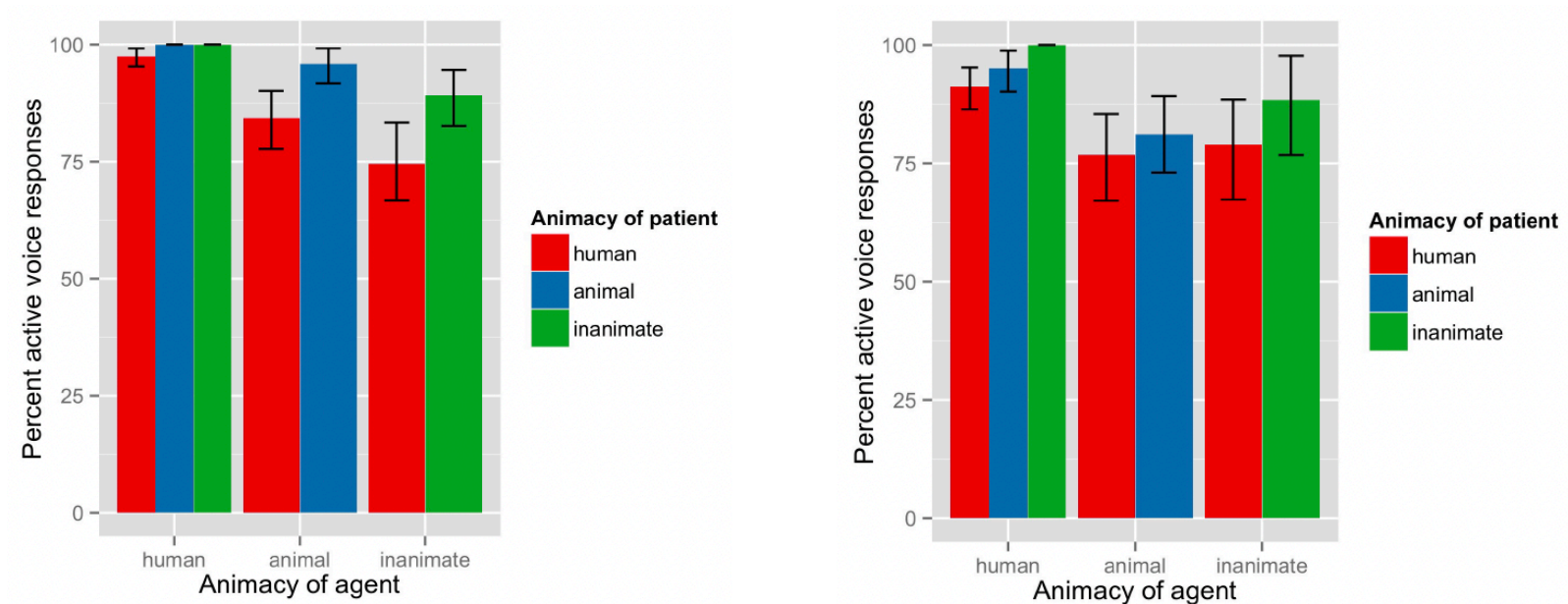


Figure 4.3. *Percentage of active-voice responses by animacy of agent and patient in Spanish (left) and Yucatec*

- ▶ animacy/humanness influenced production in both languages
 - ▶ non-human As boosted passivization in both languages, especially when P was human

- ▶ results: animacy manipulation only (E1, E2) (cont.)
 - ▶ voice: active responses (cont.)
 - ▶ analysis
 - ▶ Spanish (E1): main effects of both
 - ▶ A humanness ($\hat{\beta} = 3.08; z = 6.17; p < .001$)
 - ▶ P humanness ($\hat{\beta} = -1.67; z = -4.64; p < .001$)
 - ▶ Yucatec (E2): main effects of both
 - ▶ A humanness ($\hat{\beta} = 0.1, z = 6.03, p < .001$)
 - ▶ P humanness ($\hat{\beta} = -3.74, z = -2.39, p < .05$)

- ▶ results: animacy and topic manipulation (E3, E4)
 - ▶ word order: AVP responses
 - ▶ canonical order in Spanish, A left-dislocations in Yucatec

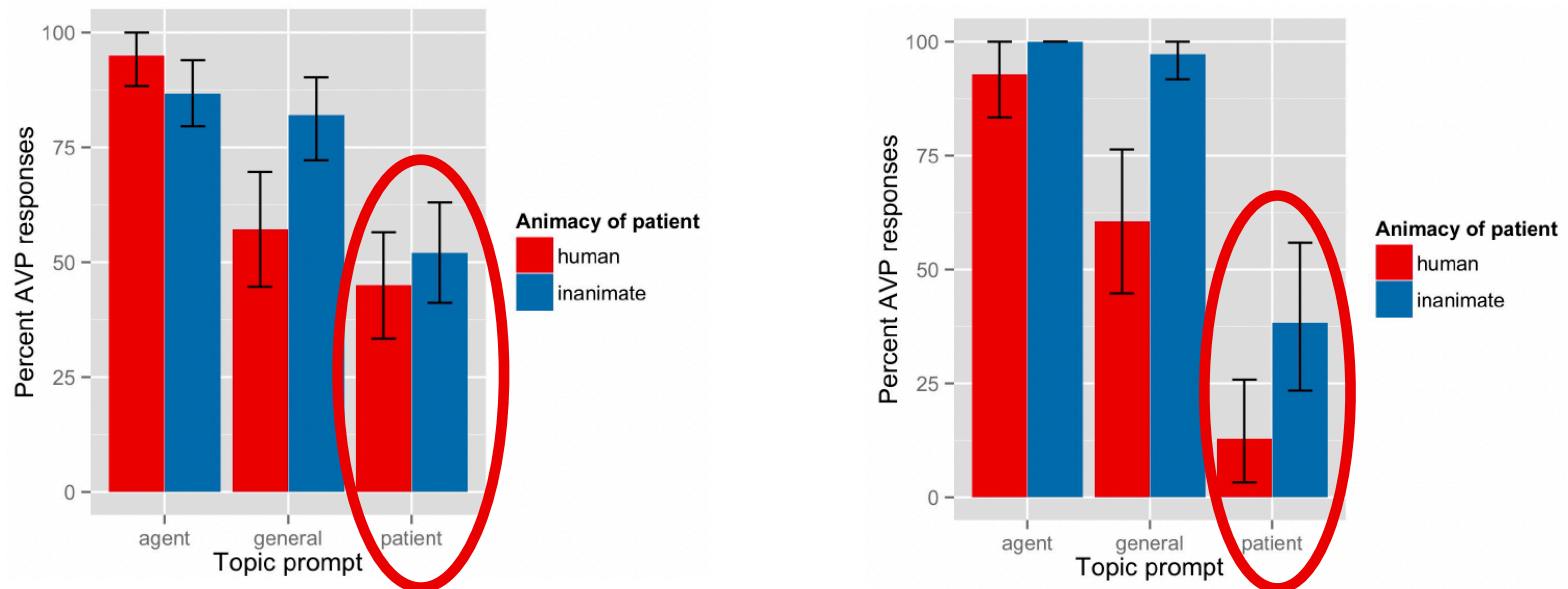


Figure 4.4. Percentage of AVP responses by topic prompt and animacy of patient in Spanish (left) and Yucatec

- ▶ topicality influences production in both languages
 - ▶ A-topic prompts strongly boost AVP responses in both pop.s
 - ▶ P-topic prompts strongly depress AVP responses esp. in Yucatec

- ▶ results: animacy and topic manipulation (E3, E4) (cont.)
 - ▶ word order: analysis – Spanish (E3)
 - ▶ main effects of both
 - ▶ A prompts ($\hat{\beta} = 0.29; z = 9.38; p < .001$)
 - ▶ general topic prompts ($\hat{\beta} = 0.26; z = 4.91; p < .001$)
 - ▶ significant interactions of P humanness
 - ▶ with A compared to general and P topics ($\hat{\beta} = 0.27; z = 4.44; p < .001$)
 - ▶ with general compared to P topics ($\hat{\beta} = -0.22; z = -2.14; p < .05$)
 - ▶ **but no main effect of animacy/humanness**

- ▶ results: animacy and topic manipulation (E3, E4) (cont.)
 - ▶ word order: analysis – Yucatec (E4)
 - ▶ main effects of
 - ▶ **P humanness** ($\hat{\beta} = -2.4$; $z = -2.83$; $p < .01$)
 - ▶ A prompts ($\hat{\beta} = 4.88$; $z = 4.81$; $p < .001$)
 - ▶ general topic prompts ($\hat{\beta} = 3.79$; $z = 5.09$; $p < .001$)
 - ▶ significant interaction of P humanness
 - ▶ with agent compared to general and patient topics ($\hat{\beta} = 0.13$; $z = 2.99$; $p < .01$)

- results: animacy and topic manipulation (E3, E4) (cont.)
 - word order: a closer look

Table 4.3. Response type frequencies by condition and population; P topic prompt responses highlighted

Spanish												Yucatec													
Patient Animacy	Topic prompt	Verb form	AV	VA	PV	VP	VAP	VPA	AVP	PVA	Total	Patient Animacy	Topic prompt	Verb form	AV	VA	PV	VP	VAP	VPA	AVP	PVA	Total		
Human	Agent	Transitive-active							57	1	58	Human	Agent	Transitive-active							39		39		
		Passive								2	2			Passive					1			3	4		
		Reflexive	3								0			0	Reflexive							1		1	
		Unaccusative									3			3	Unaccusative						1				
	General	Transitive-active			1	1			32		34		General	Transitive-active	1		2				23		24		
		Passive			7					24				31	Passive							16		18	
		Reflexive			1						1			1	Reflexive										
		Unaccusative									0			0	Unaccusative										
	Patient	Transitive-active		1	1				31	4	35		Patient	Transitive-active			3		2	4			4		
		Passive								32	34			Passive					2	2		26	2	33	
		Reflexive									0			0	Reflexive							2	2	2	
		Unaccusative								2	2			Unaccusative							1	1	1		
Inanimate	Agent	Transitive-active			1	1	1		72	1	75	Inanimate	Agent	Transitive-active							46		46		
		Passive								9	10			Passive											
		Reflexive								1	1			Reflexive											
		Unaccusative									0			0	Unaccusative	1								1	
	General	Transitive-active			1			1	50	11	50		General	Transitive-active			3	1		1	34		35		
		Passive									13			Passive									5		
		Reflexive									0			0	Reflexive						1			1	
		Unaccusative									0			0	Unaccusative										
	Patient	Transitive-active			3				37	1	38		Patient	Transitive-active							13		13		
		Passive								32	35			Passive			4	3				16		23	
		Reflexive									0			0	Reflexive								3		3
		Unaccusative	1								1			1	Unaccusative										
Total			4	1	15	2	1	1	279	120	423		Total		2	0	12	4	3	7	157	68	253		
Percent			1%	.2%	3.5%	.5%	.2%	.2%	66%	28.4%	100%		Percent		.8%	0%	4.7%	1.6%	1.2%	2.8%	62.1%	26.9%	100%		

- in Spanish, P-topic prompts triggered active AVP and passive PVA responses with even frequency
- in Yucatec, this was only the case if P was inanimate – P topic prompts with human P triggered overwhelmingly passive responses

THE EXPERIMENTS (CONT.)

results: animacy and topic manipulation (E3, E4) (cont.)

- word order:
patient left-dislocations
Spanish

Table 4.5. Response type frequencies by condition and population;
patient left-dislocations highlighted

Yucatec

Patient Animacy	Topic prompt	Verb form	AV	VA	PV	VP	VAP	VPA	AVP	PVA	Total
Human	Agent	Transitive-active							57	1	58
		Passive								2	2
		Reflexive								0	0
		Unaccusative	3							3	3
	General	Transitive-active			1	1			32		34
		Passive			7					24	31
		Reflexive			1						1
		Unaccusative									0
	Patient	Transitive-active							31	4	35
		Passive		1	1					32	34
		Reflexive									0
		Unaccusative								2	2
Inanimate	Agent	Transitive-active				1	1	1	72	1	75
		Passive			1					9	10
		Reflexive								1	1
		Unaccusative									0
	General	Transitive-active						1	50		50
		Passive			1					11	13
		Reflexive									0
		Unaccusative									0
	Patient	Transitive-active							37	1	38
		Passive			3					32	35
		Reflexive									0
		Unaccusative	1								1
Total			4	1	15	2	1	1	279	120	423
Percent			1%	.2%	3.5%	.5%	.2%	.2%	66%	28.4%	100%

Patient Animacy	Topic prompt	Verb form	AV	VA	PV	VP	VAP	VPA	AVP	PVA	Total
Human	Agent	Transitive-active							39		39
		Passive					1			3	4
		Reflexive									0
		Unaccusative						1			1
	General	Transitive-active	1						23		24
		Passive			2					16	18
		Reflexive									0
		Unaccusative									0
	Patient	Transitive-active									4
		Passive						4		26	33
		Reflexive			3		2	2		2	2
		Unaccusative								1	1
Inanimate	Agent	Transitive-active							46		46
		Passive									0
		Reflexive									0
		Unaccusative	1								1
	General	Transitive-active									35
		Passive						1	34		5
		Reflexive				3	1			1	1
		Unaccusative									0
	Patient	Transitive-active							13		13
		Passive								16	23
		Reflexive				4	3				0
		Unaccusative								3	3
Total			2	0	12	4	3	7	157	68	253
Percent			.8%	0%	4.7%	1.6%	1.2%	2.8%	62.1%	26.9%	100%

- regardless of condition, P left-dislocations are nearly absent from the Spanish responses and entirely absent from the Yucatec responses
 - the difference is not significant (Fisher Exact $p = .0807$)

- ▶ results: animacy and topic manipulation (E3, E4)
 - ▶ voice: active voice responses

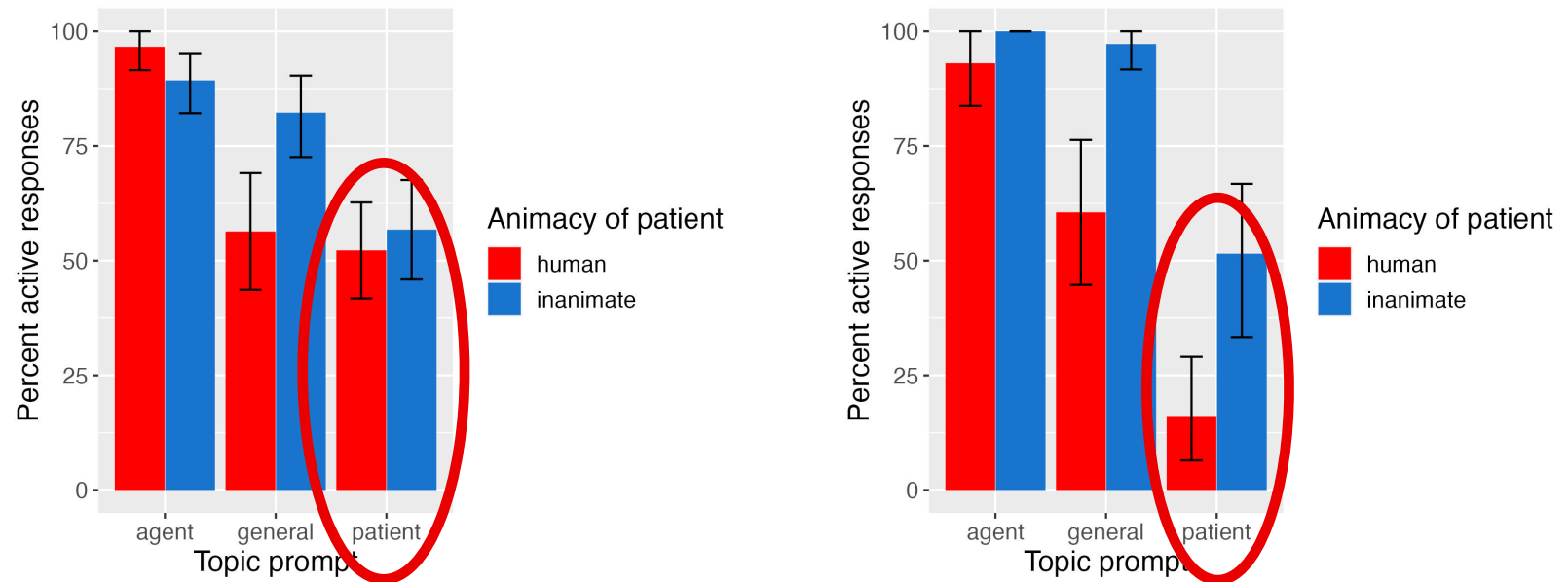


Figure 4.4. Percentage of active voice responses by topic prompt and animacy of patient in Spanish (left) and Yucatec

- ▶ topicality influences production in both languages
 - ▶ A-topic prompts strongly boost active responses in both pop.s
 - ▶ P-topic prompts strongly depress active responses especially in Yucatec

- ▶ results: animacy and topic manipulation (E3, E4) (cont.)
 - ▶ voice: analysis – Spanish (E3)
 - ▶ main effects of
 - ▶ A prompts ($\hat{\beta} = 0.29; z = 9.6; p < .001$)
 - ▶ general topic prompts ($\hat{\beta} = 0.195; z = 3.77; p < .001$)
 - ▶ significant interactions of P humanness with
 - ▶ agent vs. general and patient topics ($\hat{\beta} = 0.26; z = 4.41; p < .001$)
 - ▶ general vs. patient topics ($\hat{\beta} = -0.26; z = -2.15; p < .05$)
 - ▶ **but no main effect of animacy/humanness**

- ▶ results: animacy and topic manipulation (E3, E4) (cont.)
 - ▶ voice: analysis – Yucatec (E4)
 - ▶ main effects of
 - ▶ **P humanness ($\hat{\beta} = -0.13; z = -3.21; p < .01$)**
 - ▶ A prompts ($\hat{\beta} = 0.28; z = 9.87; p < .001$)
 - ▶ general topic prompts ($\hat{\beta} = 0.22; z = 8.22; p < .001$)
 - ▶ significant interaction of P humanness with agent vs. general and patient topics
($\hat{\beta} = 0.19; z = 3.46; p < .001$)

SYNOPSIS

- ▶ Topicality and grammar: Corpus data
- ▶ Topicality and grammar: Production data
- ▶ (Why) Yucatec
- ▶ The experiments
- ▶ Discussion

DISCUSSION

- ▶ we found clear effects of both animacy and topicality in sentence production in both Spanish and Yucatec
 - ▶ as did Prat-Sala & Branigan (2000) [PSB] in English and Spanish
- ▶ human A > non-human P \Rightarrow AVP, active voice
- ▶ topical A \Rightarrow AVP, active voice
- ▶ non-human A > human P \Rightarrow PVA, passive voice
- ▶ topical P \Rightarrow PVA, passive voice

- ▶ we did **not** confirm [PSB]'s evidence for equally frequent use of passivization and patient left-dislocation in Spanish
 - ▶ in both languages, PVA order was mostly associated with passivization – in Yucatec, categorically so
 - ▶ it's possible that this is due to a dialect difference between European Spanish and (L1) Yucatecan Spanish
 - ▶ perhaps a dialect difference caused by the long history of contact in the Yucatan peninsula

- ▶ more evidence of language-specificity
 - ▶ we found main effects of both animacy and topicality on order and voice in Yucatec
 - ▶ in contrast, in Spanish, there was only a main effect of topicality and an interaction b/w topicality and animacy
 - ▶ it seems plausible
 - ▶ that the independent effect of animacy on order in Yucatec reflects the language's obviative constraints

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THANKS!